


REMARKS

The new claims are so constructed as to clearly and patentably distinguish over the cited references.

In particular, the new claims are drawn to the embodiment of Fig. 2 and should be interpreted with specific reference to the waveforms of Fig. 3.

Applicant hopes that Examiner will find the new claims understandable without further elaborations.



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CLAIMS in FWC of Serial No. 06/787,692

01  
Rule 126  
147

145. An arrangement comprising:

DC source means operative to provide a DC voltage at a pair of DC terminals;

inverter means connected with the DC terminals and operative to provide an AC voltage at a pair of AC terminals; the AC voltage having a cycle period; the inverter means including a periodically conducting transistor having a pair of control terminals receptive of a control signal; the inverter means also including a control signal source operative to provide the control signal; the control signal rendering the transistor conductive for a brief period of time once during each cycle period; the duration of the brief period of time being shorter than half the duration of the cycle period;

gas discharge lamp means having a set of lamp terminals; and

circuit means connected between the AC terminals and the lamp terminals; the circuit means being operative to cause a lamp current to flow through the gas discharge lamp means in response to the AC voltage.

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146. The arrangement of claim ~~145~~ <sup>147</sup> wherein the AC voltage is characterized by having a waveshape that is substantially trapezoidal.

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147. The arrangement of claim ~~145~~ <sup>147</sup> wherein the instantaneous magnitude of the AC voltage alternates once each cycle period, between a first substantially constant-magnitude voltage level and a second substantially constant-magnitude voltage level, existing for a first duration at the first substantially constant-magnitude voltage level and for a second duration at the second substantially constant-magnitude voltage level; the first duration being substantially equal to the second duration.

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148. The arrangement of claim ~~147~~ <sup>149</sup> wherein the first duration is substantially shorter than half of the complete duration of the cycle period.

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149. The arrangement of claim ~~148~~ <sup>150</sup> wherein the first duration is shorter than half of the complete duration of the cycle period by at least one-tenth. new

<sup>147</sup>  
~~150~~150. The arrangement of claim ~~145~~ wherein: (i) the DC source means is powered from a pair of power line conductors connected with an ordinary electric utility power line; and (ii) one of the lamp terminals is connected with one of the power line conductors without any intervening impedance means.

<sup>153</sup>  
~~151~~151. The arrangement of claim ~~145~~<sup>147</sup> wherein the control signal is a periodic voltage having a peak-to-peak magnitude substantially larger than twice the forward voltage drop of a semiconductor diode junction. *www*

*01 Cont.*  
<sup>154</sup>  
~~152~~152. The arrangement of claim ~~145~~<sup>147</sup> wherein the inverter includes two transistors series-connected across the DC terminals.

<sup>155</sup>  
~~153~~153. The arrangement of claim ~~145~~<sup>147</sup> wherein the control signal source includes a saturable inductor means.

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<sup>156</sup>  
~~154~~154. The arrangement of claim ~~153~~<sup>155</sup> wherein the circuit means includes an LC circuit having a natural resonance frequency approximately equal to the fundamental frequency of the AC voltage.

<sup>157</sup>  
~~155~~155. The arrangement of claim ~~154~~<sup>156</sup> wherein the LC circuit includes a capacitor and an inductor series-connected across the AC terminals.

<sup>158</sup>  
~~156~~156. The arrangement of claim ~~145~~<sup>147</sup> wherein the duration of the brief period of time is shorter than half the duration of the cycle period by about one tenth or more. *www*

<sup>159</sup>  
~~157~~157. The arrangement of claim ~~145~~<sup>147</sup> wherein:  
(a) the instantaneous magnitude of the AC voltage alternates once each cycle period between a first substantially constant-magnitude voltage level and a second substantially constant-magnitude voltage level, existing for a first duration at the first substantially constant-magnitude voltage level and for a second duration at the second substantially constant-magnitude voltage level; the first duration being substantially equal to the second duration; and

(b) the duration of the brief period is substantially shorter than the first duration.

<sup>160</sup>  
~~158~~158. The arrangement of claim ~~157~~<sup>159</sup> wherein the duration of the brief period is shorter than the first duration by about one tenth or more. *www*

<sup>161</sup>  
~~159~~. The arrangement of claim <sup>147</sup>~~145~~ wherein the fundamental frequency of the AC voltage is substantially higher than that of the power line voltage usually provided by an ordinary electric utility power line. 7602

<sup>162</sup>  
~~160~~. An arrangement comprising:

DC source means operative to provide a DC voltage between a first and a second DC terminal;

*cont.*  
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inverter means connected with the DC terminals and operative to provide an AC voltage between a first and a second AC terminal; the AC voltage having a fundamental cycle period; the fundamental cycle period consisting of a first and a second half cycle; the duration of the first half cycle being about equal to the duration of the second half cycle; the inverter means including a periodically conducting transistor operative to cause the potential of the first AC terminal to be substantially equal to the potential of the first DC terminal during a certain part of the first half cycle and to be substantially different from the potential of the first DC terminal during the remainder of the fundamental cycle period; the duration of said certain part being shorter than the duration of the first half cycle by a substantial amount; 16 17

gas discharge lamp means having a set of lamp terminals; and

circuit means connected between the AC terminals and the lamp terminals; the circuit means being operative to cause a lamp current to flow through the gas discharge lamp means in response to the AC voltage.

<sup>163</sup>  
~~161~~. The arrangement of claim <sup>162</sup>~~160~~ wherein the duration of said certain part is shorter than the duration of the first half cycle by about one tenth or more. 161

<sup>164</sup>  
~~162~~. The arrangement of claim <sup>163</sup>~~161~~ wherein the duration of said certain part is shorter than four fifths of the duration of the first half cycle. 162

<sup>165</sup>  
~~163~~. The arrangement of claim <sup>162</sup>~~160~~ wherein the AC voltage is characterized by having a substantially trapezoidal waveshape.